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PATENT

Docket No: MO06010USU

Serial No.: 09/726,953

REMARKSSTATUS SUMMARY

Claims 1-16 are pending in the present application. Claims 1-16 are rejected. In this paper, Applicant has amended independent claims 1, 8 and 12 and dependent claims 15 and 16, canceled claims 6, 7, 10 and 11, and added dependent claims 17-20. Applicant has also made minor amendments to certain paragraphs of the specification to correct reference numerals and typographical errors. The amendments are supported by the application as originally filed, and accordingly no new matter has been added.

EXAMINER INTERVIEW SUMMARY

On April 18, 2007, Applicant's attorney David P. Gloekler engaged in an Interview with the Examiner, as also summarized in the Interview Summary mailed April 25, 2007. Applicant wishes to thank the Examiner for her time and effort in conducting the Interview, and particularly the comprehensive, helpful written comments provided by the Examiner in the Interview Summary. The inventions as claimed in claims 1, 8 and 12 were discussed in view of the cited prior art reference Kawesh (U.S. Pat. No. 6,019,754). In addition, the Examiner called attention to the prior art reference Knab et al. (U.S. 3,923,482), which at present has not been formally cited on record. The Examiner suggested that Applicant consider reciting additional language in the claims relating to the "air flow module" to better distinguish the invention over the prior art. Agreement was reached as to the suggestion to incorporate structure of the recited airflow module (i.e, vent

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blade) to further define the invention. *See* Interview Summary, paragraph 4 of Examiner's written comments. Accordingly, in the present Amendment, Applicant has amended the claims in view of the Interview.

CLAIM REJECTIONS – 35 U.S.C. § 103

Claims 1-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawesh in view of Glockler (U.S. Patent No. 6,251,101). Applicant respectfully traverses this rejection in view of the amendments made to independent claims 1, 8 and 12.

As indicated above, Applicant has amended independent claims 1 and 8 to recite "an air flow module including an outlet and a plurality of vent blades adjustably mounted to the outlet, the vent blades being adjusted to direct a laminar flow of air from the outlet, around the vent blades, and above the cornea of the patient from one side of the cornea to another side of the cornea, at a distance so that the cornea is not dehydrated by the flow of air." Applicant has amended independent claim 12 to recite "operating an air flow module including an outlet and a plurality of vent blades adjustably mounted to the outlet, wherein operating includes adjusting the vent blades to direct a laminar flow of air from the outlet, around the vent blades, and above the cornea from one side of the cornea to another side of the cornea, at a distance so that the cornea is not de-hydrated by the flow of air."

Neither Kawesh nor Glockler teach or render obvious an air flow module with an outlet and adjustably mounted vent blades in the manner recited in Applicant's claims. Moreover, as discussed in previous communications during the course of this examination,

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Kawesh expressly teaches directing a flow of air to a patient's eye to dry the corneal flap. See Kawesh at col. 1, lines 11-14; col. 2, lines 62-64; col. 3, lines 7-11; col. 3, lines 27-33; col. 3, lines 38-43; col. 3, lines 51-52; col. 5, lines 12-16; col. 5, lines 51-54. In Applicant's invention, a mass flow of air (e.g., curtain, barrier, etc.) above the cornea is established to keep the eye clean of floating debris in the ambient environment that might otherwise land on or in the eye, and to prevent the laser plume from being inhaled by the surgeon. Kawesh's only teaching of keeping the eye clean is by way of a "flushing step [that] assures that the corneal flap/inner corneal layer is free from impurities . . .", which flushing step is then followed by air-drying. See Kawesh, col. 4, line 66 to col. 5, line 1; and col. 5, lines 11-16.

In the above-referenced Office Action mailed 1/10/07, the Examiner calls attention to Kawesh, col. 5, lines 26-28 ("manually operated . . . manipulated to direct . . . flow of . . . air over"). See also Interview Summary, paragraph 1 of Examiner's written comments. Applicant notes that the complete passage of Kawesh reads "manipulated to direct a very low flow of filtered, compressed air over the repositioned corneal flap *in order to draw the fluid out of the cornea/flap interface.*" This teaching by Kawesh is consistent with Applicant's contention that Kawesh teaches directing a flow of air directly into the eye for the express function of drying, in direct contrast to the systems and methods claimed by Applicant.

Moreover, Applicant respectfully does not agree with the entirety of the following statement in paragraph 2 of the Interview Summary: "Kawesh US'754 teaches

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'compressed air', by definition compressed air is dense which would provide a curtain of air flow rather than a turbulence air flow, thereby a laminar flow would inherently prevent contamination." The fluid dynamics of compressed air flowing through a conduit change according to the transition (i.e., opening) from the conduit to an ambient environment. Whether a flow of compressed air produces turbulent or laminar flow, and whether compressed air produces a certain shape of air flow such as a curtain, etc., would depend on the structure of the opening (orifice, nozzle, valve, physical obstructions spanning the opening, etc.) from which the compressed air is emitted and thereafter expands into the environment ambient to the compressed-air conduit. Kawesh's teaching consists only of mentioning a "flow restricting valve 206" and illustrating this valve as a schematic box. Applicant respectfully submits that Kawesh does not inherently teach a curtain-type flow or any particular type of flow that would prevent contamination. As quoted above, Kawesh teaches providing a flow of air to dry the cornea or corneal flap such as by "draw[ing] the fluid out of the cornea/flap interface." Because Kawesh teaches (1) the use of a valve that (2) performs a drying or fluid removal function that is specific (or localized) to the eye, Applicant respectfully submits that it is more plausible to consider Kawesh as suggesting the use of a valve to create a coherent, narrow-diameter stream of air to facilitate directing the air at the small target presented by the eye. This suggestion further demonstrates the inconsistency between Kawesh's teaching and Applicant's invention.

The new reference discussed during the above-noted Examiner Interview, Knab et al., teaches a "clean air directing apparatus" that flows air directly toward the operating

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table. Knab et al. fails to teach or render obvious "vent blades being adjusted to direct a laminar flow of air from the outlet around the vent blades and above the cornea of the patient from one side of the cornea to another side of the cornea, at a distance so that the cornea is not dehydrated by the flow of air" as recited in claims 1 and 8, nor the similar features recited in claim 12. Knab et al., in Figures 2 and 4, teaches an "air straightening grid 35." Neither this grid nor the elements that make up the grid (concentric baffles supported by radial brackets) are adjustable. The only way to control air flow in the apparatus taught by Knab et al. would be to manipulate the ceiling-mounted "universal bracket 38" shown in Figure 1.

In view of the foregoing, Applicant respectfully submits that claims 1, 8 and 12 as amended, and all remaining claims at least by way of dependency, are patentable over all prior art of record.

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CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Office Action.

Respectfully submitted,

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